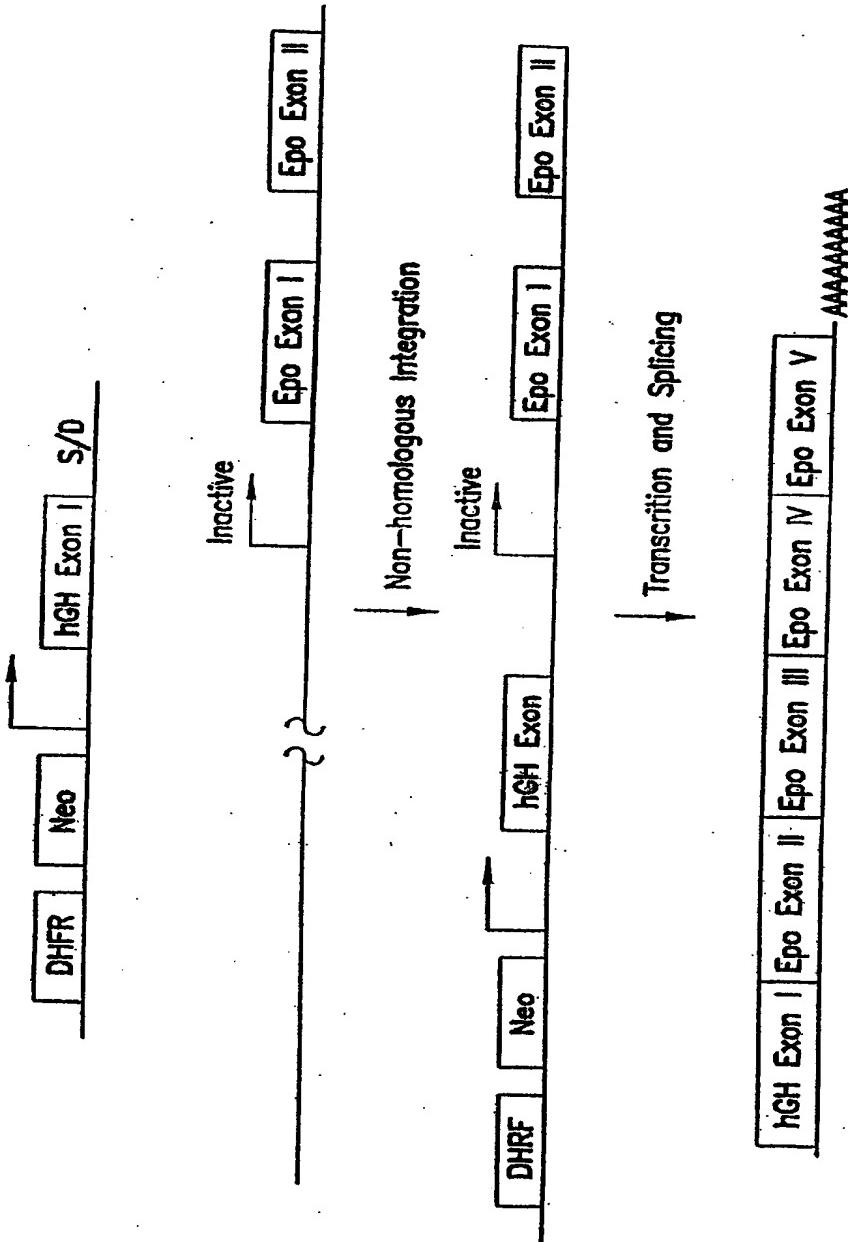


FIG. 1.

Random Activation of Gene Expression (RAGE)



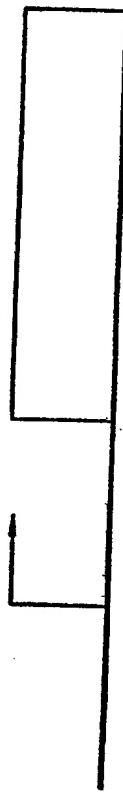
BEST AVAILABLE COPY

FIG. 2.

Activation Constructs without Translation Start Codons

Construct#

1

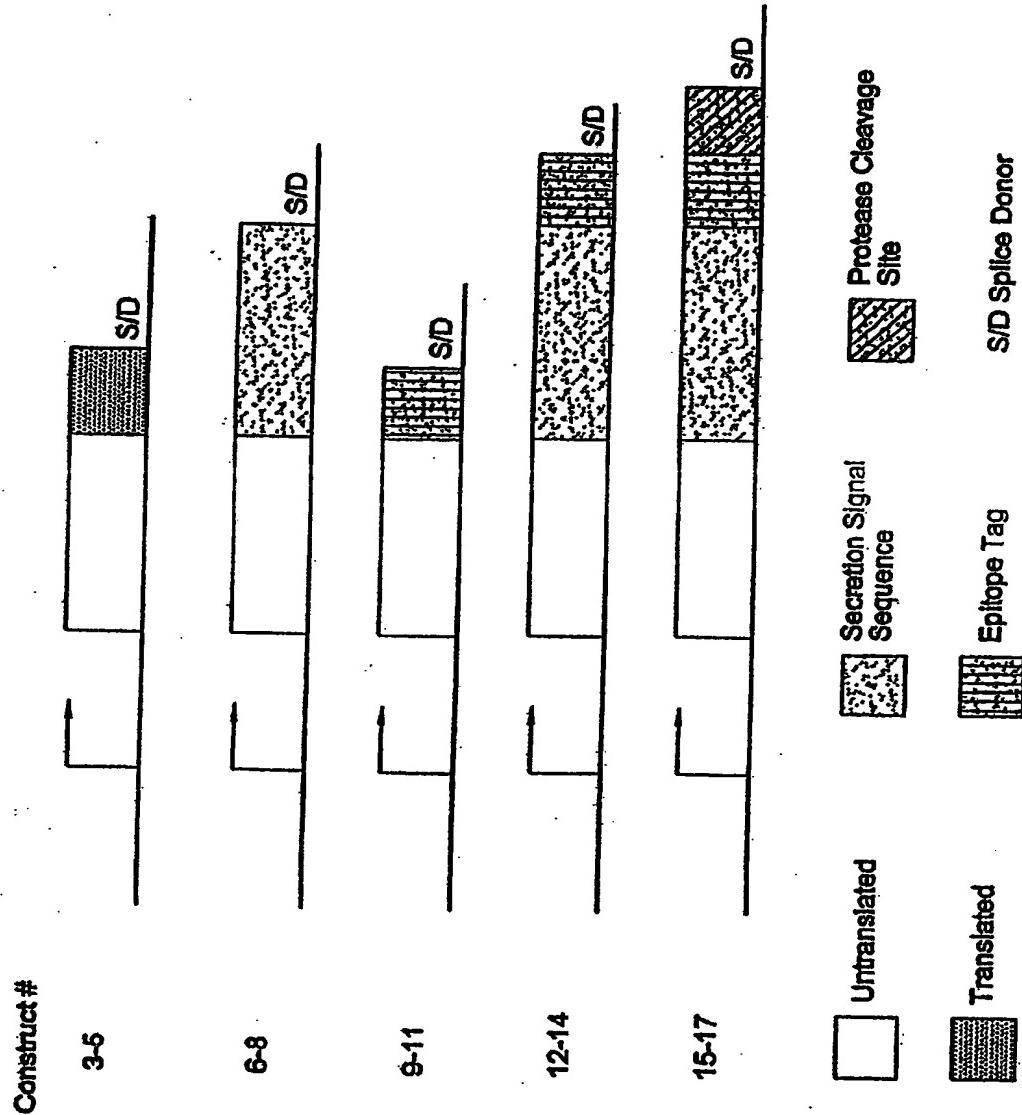


2



S/D Splice Donor

FIG. 3.



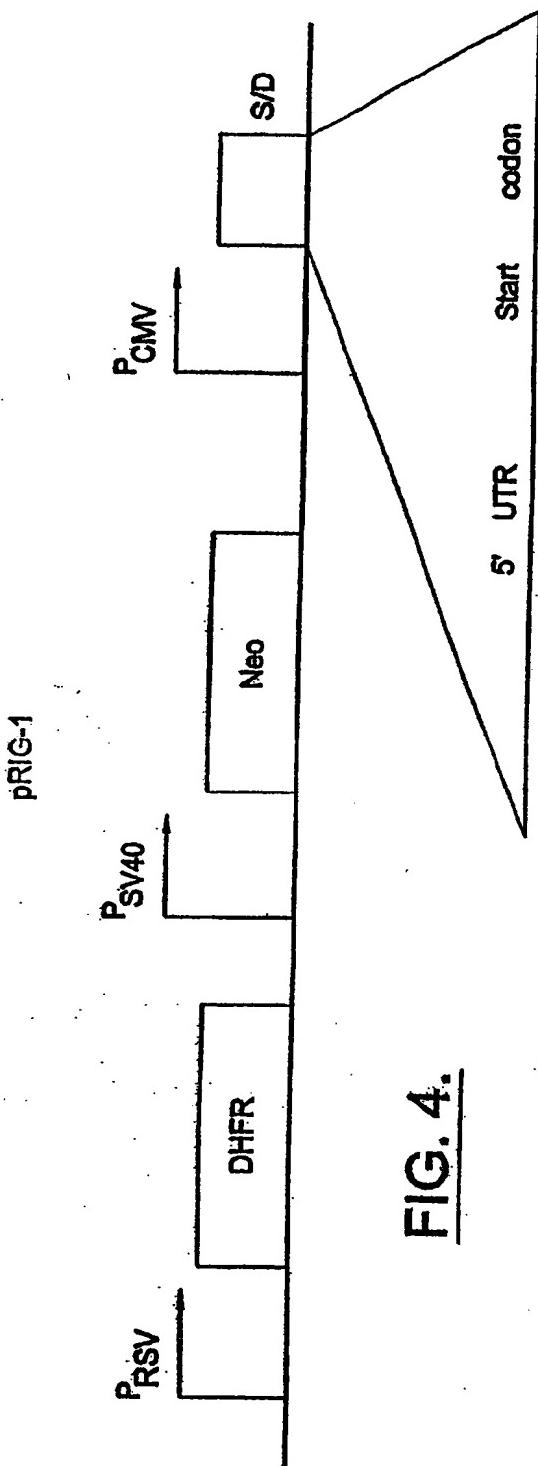


FIG. 4.

5' AGATCTTCAATATTGGCATTAGCCATATTATTGTTATAGCATAAATC  
AATATTGGCTATTGGCATTGCATA  
CGTTGTATCTATATCATAATATGTACATTATATTGGCTCATGTCCAATATGACCG  
CCATGTTGGCATTGATTATTGACT  
AGTTATTAAATAGTAATCAATTACGGGGTCATTAGTCATAGCCCATAATGGAGT  
TCCGCGTTACATAACTTACGGTAAA  
TGGCCCGCCTGGCTGACCGCCAAACGACCCCCGCCATTGACGTCAATAATGACG  
TATGTTCCCATAGTAACGCCAATAG  
GGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCACTTGGC  
AGTACATCAAGTGTATCATATGCCA  
AGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCCGCTGGCATTATGCC  
AGTACATGACCTTACGGGACTTCC  
TAATTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTATGCGGTTT  
GGCAGTACACCAATGGCGTGGAT  
AGCGGTTTGACTCACGGGGATTCCAAGTCTCCACCCATTGACGTCAATGGGAC  
TTTGTGCGACCAAAATCAACGG  
GAATTCCAAAATGTCGTACAACACTGCGATGCCGCCGGTGTGACGCAAATGGG  
CGGTAGGCCTGTACGGTGGGAGGTC  
TATATAAGCAGAGCTCGTTAGTGAACCGTCAGATCACTAGAAGCTTATTGCGG  
TAGTTTATCACAGTTAAATTGCTAA  
CGCAGTCAGTGCTCTGACACAAACAGTCTCGAACTTAAGCTGCAGTGACTCTCTT  
AATTAACTCCACCAGTCTCACTTCA  
GTTCTTTGCCTCCACCAAGTCTCACTTCAGTTCTTTGATGAAGAGCTCAGAA  
TCAAAAGAGGAAACCAACCCCTAA  
GATGAGCTTCCATGTAATTGAGCCAGCTTCTCTGATTTCAATGTTCTT  
CCAAAGGTGCAGTCTCCAAAGAGA  
TTACGAATGCCTGGAAACCTGGGGTGCCTGGGTAGGACATCAACTGGACAT  
TCCTAGTTTCAAAATGAGTGATGAT  
ATTGACGATAAAATGGAAAAAAACTTCAGACAAGAAAAAGATTGCACAATTCA  
AAAAAGAGAAAGAGACTTCAAGGA  
AAAAGATACTATAAGCTATTAAAAATGGAACCTCTGAAAATTAAGCATCTGAAG  
ACCGATGATCAGGATATCTACAAGG  
TATCAATATATGATACAAAAGGAAAAAAATGTGTTGGAAAAAAATTGATTGAA  
GATTCAAGAGAGGGCTCAAAACCA  
AAGATCTCTGGACTTGTATCAACACAACCCCTGACCTGTGAGGTAATGAATGGAA  
CTGACCCCGAATTAAACCTGTATCA  
AGATGGGAAACATCTAAACCTTCAGAGGGTCATCACACACAAGTGGACCACC  
AGCCTGAGTGCAAATTCAAGTGCA  
CAGCAGGGAAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTAGCTGTCCAG  
AGAAAGGGATCCAGGTGAGTAGGGCC  
CGATCCTCTAGAGTCGAGCTCTTAAGGTAGCAAGGTTACAAGACAGGTTAA  
GGAGACCAATAGAAACTGGGCTTGT  
CGAGACAGAGAAGACTCTTGCCTTGTAGAGCACCTATTGGTCTTACGGGCC  
GCGAATTCCAAGCTTGAGTATTCTA  
TCGTGTCACCTAAATAACTTGGCTAACATGGTCATATCTGTTCTGTGTGAA  
ATTGTTATCCGCTCACAAATTCCACA  
CAACATACGAGCCGGAAGCATAAAGTGAAAGCTGGGTGCCTAATGAGTGAC  
CTAACTCACATTAATTGCGTTGCGCATGCTTCATTGTGAGGGTTAATGC-

**FIG. 5A.**

TTCGAGAAGACATGATAAGATAACATTGATGAGTTGGACAAACCACAACAAGAAT  
GCAGTGAACAAATGCTTATTGTGAAATTGTGATGCTATTGCTTATTGTAA  
CCATTATAAGCTGCAATAAACAA  
AGTTAACAAACAACAATTGCATTCACTTATGTTCAGGTTCAGGGGGAGATGTGG  
GAGGTTTTAAAGCAAGTAAAACC  
TCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGAAT  
GGACGGGCCCTGTAGCGCGCATTA  
AGCGCGGGCGGGTGTGGTACCGCAGCTGACCGCTACACTTGCCAGCGCCC  
TAGCGCCCGCTCCTTCGCTTCTC  
CCTTCCTTCTGCCACGTTGCCGGCTTCCCCGTCAAGCTCTAAATGGGGGG  
TCCCTTAGGGTCCGATTAGTGC  
TTTACGGCACCTCGACCCCCAAAAAAACTGATTAGGGTGATGGTCACGTAGTGGG  
CCATCGCCCTGATAGACGGTTTTTC  
GCCCTTGACGTTGGAGTCCACGTTCTTAATAGTGGACTCTTGTCCAAACTGG  
AACAAACACTCAACCCATCTCGGT  
TATTCTTTGATTATAAGGGATTGCGATTGCCCTATTGGTAAAAATGA  
GCTGATTAAACAAAATTAAACGCTTACAATTGCCCTGTACCTCTGAGGC  
AAAGAACCCAGCTGTGGAATGTGT  
CAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGC  
ATGCATCTCAATTAGTCAGCAACCA  
GTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCATCT  
CAATTAGTCAGCAACCAAGTCCCC  
CCCTAACTCCGCCCATCCCCCCCCTAACTCCGCCAGTTCCGCCATTCTCGCC  
CCATGGCTGACTAATTTTTATT  
TATGCAGAGGCCAGGCCCTCGGCCCTGAGCTATTCCAGAAGTAGTGAGGA  
GGCTTTTGGAGGCCCTAGGTTTG  
AAAAAGCTTGATTCTCTGACACAAACAGTCTGAACTTAAGGCTAGAGCCACCA  
TGATTGAACAAGATGGATTGCAACGC  
AGGTTCTCCGCCGCTTGGGAGAGGCTATTGGCTATGACTGGCACAACAC  
ACAATGGCTGCTCTGATGCCCG  
TGTTCGGCTGTCAAGCGCAGGGCGCCCGGTTCTTTGTCAAGACCGACCTGTC  
CGGTGCCCTGAAATGAACTGCAAGGAC  
GAGGCAGCGCGCTATCGTGGCTGGCACGACGGCGTTCCGGCAGCTGTG  
CTCGACGGTTGTCACTGAAGCGGGAAAG  
GGACTGGCTGCTATTGGCGAAGTGGCGGGGAGGATCTCCTGTCATCTCACCT  
GCTCCTGCCGAGAAAAGTATCCATCA  
TGGCTGATGCAATGCGGGCGCTGCATACGCTTGAATCCGGCTACCTGCCATTG  
CCACCAATGCGAAACATCGCATCGAG  
CGAGCACGTACTCGGATGGAAGCCGGTCTTGTGATCAGGATGATCTGGACGAA  
GAGCATCAGGGGCTCGCGCCAGCCGA  
ACTGTTGCCAGGCTCAAGGCGCGATGCCCGACGGCGAGGATCTGTCGTGAC  
CCATGGCGATGCCGTGCTTGGCAATA  
TCATGGTGGAAAATGGCGCTTCTGGATTGACTGACTGTGGCCGGCTGGGTGT  
GGCGGACCGCTATCAGGACATAGCG  
TTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGAATGGGCTGACCGCTTCC  
TCGTGCTTACGGTATGCCGCTCC  
CGATTGCGAGCGCATGCCCTCTATGCCCTTGTGACGAGTTCTCTGAGCGGG  
CTCTGGGGTTCGAAATGACCGACCAAGCGACGCCAACCTGCCATCACGATGGC-

**FIG. 5B.**

CGCAATAAAATCTTATTTCATTACATCTGTGTGGTTTTGTGAAGA  
TCCGCGTA-  
TGGTGCACTCTCAGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGAC  
ACCCGCCAACAC  
CCGCTGACGCCCTGACGGGCTGTCTGCTCCCGCATCCGCTTACAGACAAGC  
TGTGACCGTCTCCGGAGCTGCATG  
TGTCAAGAGGTTTCACCGTCATCACCGAAACCGCGAGACGAAAGGGCCTCGTA  
TACGCCATTNTTATAGGTTAATGT  
CATGATAATAATGGTTCTTAGACGTCAGGTGGACTTTGGAAATGTGC  
GGAACCCCTATTGTTATTTC  
AAATACATTCAAATATGTATCCGCTCATGAGACAATAACCCGTATAATGCTTCA  
ATAATATTGAAAAGGAAGAGATG  
AGTATTCAACATTCCGTGTCGCCCTTATTCCCTTTTGC GGCAATTTCCTTCC  
TGTTTGCTCACCCAGAAACGCT  
GGTGAAGTAAAAGATGCTGAAGATCAGTTGGTGACGAGTGGTTACATCGA  
ACTGGATCTCAACAGCGGTAAAGATCC  
TTGAGAGTTTCGCCCGAAGAACGTTCCAATGATGAGCAGTTAAAGTTCT  
GCTATGTGGCCGGTATTATCCGT  
ATTGACGCCGGCAAGAGCAACTCGGTGCCGCATACACTATTCTCAGAATGACT  
TGGTGAAGTACTCACCAAGTCACAGA  
AAAGCATCTTACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAACC  
ATGAGTATAACACTGCCGCAACT  
-TACTCTGACAACGATCGGAGGACCGAAGGGAGCTAACCGCTTTTGACAAACAT  
GGGGGATCATGTAACCTGCCCTGAT  
CGTTGGGAACCGGAGCTGAATGAAGCCATACAAACGACGAGCGTGACACCACG  
ATGCCGTAGCAATGGCAACAAACGTT  
GCGAAACTATTAACGGCGAACTACTACTCTAGCTTCCGGCAACAATTATA  
GAATGGGATGGAGGGCGGATAAAGTTG  
CAGGACCACTCTGCGCTCGGCCCTCCGGCTGGCTGGTTATTGCTGATAATC  
TGGAGCCGGTGAGCGTGGGTCTCGC  
GGTATCATGCGCACTGGGCCAGATGGTAAGCCCTCCGTATCGTAGTTATCT  
ACACGACGGGAGTCAGGCAACTAT  
GGATGAACGAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATTGG  
TAACTGTCAGACCAAGTTACTCAT  
ATATACTTAGATTGATTAAAACCTCATTTAATTAAAAGGATCTAGGTGAAG  
ATCCTTTTGATAATCTCATGACC  
AAAATCCCTAACGTGATTTCTGTTCCACTGAGCGTCAGACCCGTAGAAAAGA  
TCAAAGGATCTCTTGAGATCCTT  
TTTCTGCGCGTAATCTGCTGCTGCAAACAAAAAACCACCGCTACCGCGGTG  
GTTTGTGCGGATCAAGAGCTAC  
CAACTCTTTTCCGAAAGGTAACCTGGCTCAGCAGAGCGCAGATACAAATACTGT  
CCTCTAGTGTAGCGTAGTTAGGC  
CACCACTCAAGAACTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCTGT  
TACCACTGGCTGCTGCCAGTGGCGA  
TAAGTCGTGCTTACCGGTTGGACTCAAGACGATAGTTACCGGATAAGGCGCAG  
CGGTGGGGCTGAACGGGGGTTCGT  
GCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAAGTACCTACAGC  
GTGAGCTATGAGAAAGCGCCACGCTT  
CCCGAAGGGAGAAAGGCGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAGG-

**FIG. 5C.**

AGAGCGCACGAGGGAGCTTCAAGGGGAAACGCCCTGGTATCTTTATAGTCCTGTC  
GGGTTTCGCCACCTCTGACTTGAGCGTCGATTGGATGCTCGTCAGGGG  
GGCGGAGCTATGGAAAAACGCCAGCAACGCCCTTTAAGGTTCTGGCCTT  
TTGCTGGCCTTTGCTCACATGGCT  
CGAC3'

FIG. 5D.

SAGATCTTCAATATTGCCATTAGCCATTATTATTGTTATATAGCATAAATC  
AATATTGGCTATTGCCATTGCAT  
ACGTGTATCTATATCATAATATGTACATTATATTGGCTATGTCCAATATGACC  
GCCATGTTGGCATTGATTATTGAC  
TAGTTATTAAATAGTAATCAATTACGGGTCAATTAGTCATAGCCCATAATGGAC  
TTC CGT TACATAACTACGGTAA  
ATGGCCCGCCTGGCTGACCGCCCCAACGACCCCCGCCATTGACGTCAATAATGAC  
GTATGTTCCCATAGTAACGCCAATA  
GGGACTTTCCATTGACGTCAATGGGTGGAGTATTTACGGTAAACTGCCACTTGG  
CAGTACATCAAGTGTATCATATGCC  
AAGTCCGCCCTATTGACGTCAATGACGGTAAATGGCCCGCCTGGCATTATGCG  
CAGTACATGACCTTACGGGACTTTC  
CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCATGGTATGCGGTT  
TTGGCAGTACACCAATGGCGTGA  
TAGCGGTTTGA CTCACGGGATTCCAAGTCTCCACCCATTGACGTCAATGGGA  
GTTTGTGCAACCAAAATCAACG  
GGACCTTCCAAAATGTCGTAAACA ACTGCGATCGCCGCCCGTTGACGCAAATGG  
GCGGTAGGC GTGTACGGTGGAGGT  
CTATATAAGCAGAGCTCGTTAGTGAACCGTCAGATCACTAGAAGCTTTATTGCG  
GTAGTTTATCACAGTAAATTGCTA  
ACGCAGTCAGTGCTCTGACACAACAGTCTCGAACTTAAGCTGCAGTGA CTCT  
TAATTAACTCCACCAAGTCTCACTTC  
AGTTCCCTTGCCTCCACCAAGTCTCACTTCAGTCCCTTGCATGAAGAGCTAGA  
ATCAAAAGAGGAAACCAACCCCTA  
AGATGAGCTTCCATGTAAATTGTAGCCAGCTCCTCTGATTTCAATGTTCT  
TCCAAAGGTGCAGTCTCCAAAGAG  
ATTACGAATGCCTTGGAAACCTGGGGTGCCTTGGGTAGGACATCAACTGGACA  
TTCCTAGTTTCAAATGAGTGTGA  
TATTGACGATAAAAATGGAAAAAAACTTCAGACAAGAAAAAGATTGCACAATT  
AGAAAAGAGAAAGAGACTTCAAGG  
AAAAAGATA CATATAAGTATTAAAAATGGAACTCTGAAAATTAAGCATCTGAA  
GACCGATGATCAGGATATCTACAAG  
GTATCAATATATGATACAAAAGAAAAATGTGTTGGAAAAAAATATTGATTG  
AGATTCAAGAGAGGGTCTCAAAACC  
AAAGATCTCTGGACTGTATCAACACAACCTGACCTGTGAGGTAATGAATGGA  
ACTGACCCCGAATTAAACCTGTATC  
AAGATGGGAAACATCTAAAACCTTCAGAGGGTCACTCACACACAAGTGGACCAC  
CAGCCTGAGTGC AAAATTCAAGTGC  
ACAGCAGGGAAACAAAGTCAGCAAGGAATCCAGTGTGAGCCTGTCAGCTGTCCA  
GAGAAAGGGATCCCAGGTGAGTAGGG  
CCCGATCCTCTAGAGTCGAGCTCTCTTAAGGTAGCAAGGTTACAAGACAGGTT  
AAGGAGACCAATAGAAACTGGGCTT  
GTCGAGACAGAGAAGACTCTTGCCTTCTGATAGGCACCTATTGGTCTACGCGG  
CCGCGAATTCCAAGCTTGAGTATT  
TATCGTGTACCTAAATAACTTGGCGTAATCATGGTCAATCTGTTCTGTGTGA  
AATTGTTATCCGCTACAATTCCA  
CACAAACATACGAGCCGGAAGCATAAAGTGTAAAGCCTGGGGTGCCTAATGAGTG  
AGCTAACTCACATTAAATTGCGTGTGCG  
CGATGTTCCAATTGTGAGGGTTAATGCTCGAGAAGACATGATAAGATAACATT  
GATGAGTTGGACAAACCAACACAAGAATGCAGTGA AAAAATGCTTATTG-

**FIG. 6A.**

GAAATTGTGATGCTATTGCTTATTGTAACCATTATAAGCTGCAATAAA  
CAAGTTAACACAAACAATTGCATTCACTTATGTTTCAGGTTCAAGGGGAGATGT  
GGGAGGTTTTAAAGCAAGTAAA  
CCTCTACAAATGTGGTAAATCCGATAAGGATCGATTCCGGAGCCTGAATGGCGA  
ATGGACGCGCCCTGTAGCGGCAG  
TAAGCGCGGGGGTGTGGTACGCGCACGTGACCGCTACACTTGCCAGCGC  
CCTAGCGCCCCCTCCTTCGCTTCT  
TCCCTCTTCGACGTTGCCAGTCCGGCTTCCCCGTCAAGCTCTAAATCGGGG  
GCTCCCTTAAGGGTCCGATTTAGT  
GCTTACGGCACCTCGACCCCCAAAAACTGATTAGGGTATGGTACGTAGTG  
GGCCATCGCCCTGATAGACGGTTT  
TCGCCCTTGACGTTGGAGTCCACGTTCTTAATAGTGGACTCTGTTCCAAACTG  
GAACAAACACTCAACCCATCTCGG  
TCTATTCTTTGATTATAAGGGATTTGCCGATTCGGCTATTGGTTAAAAAAT  
GAGCTGATTTAACAAAAAATTAAAC  
GCGAATTAAACAAAATTTAACGCTTACAATTTCGCTGTGACCTTCTGAGGC  
GGAAAGAACCAAGCTGTGGAATGTGT  
GTCAGTTAGGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAA  
GCATGCATCTCAATTAGTCAGCAACC  
AGGTGTGGAAAGTCCCCAGGCTCCCCAGCAGGCAGAAGTATGCAAAGCATGCAT  
CTCAATTAGTCAGCAACCATAGTCCC  
GCCCTTAACCTCGCCCATCCGCCCTAACCTCCGCCAGTCCGCCATTCTCG  
CCCCATGGCTGACTATT  
TTTATGCAGAGGCCGAGGCCCTCGGCCTTGAGCTATTCCAGAAGTAGTGAGG  
AGGCTTTTGAGGCCCTAGGCTT  
TGCAAAAGCTGATTCTCTGACACAACAGTCTGAACTTAAGGCTAGAGCCAC  
CATGATTGAACAAGATGGATTGAC  
GCAGGTTCTCCGGCCGCTGGGTGGAGAGGCTATTGGCTATGACTGGCACAAAC  
AGACAATCGGCTGCTCTGATGCCG  
CGTGTCCGGCTGTCAAGCGCAGGGCGCCGGTTCTTTGTCAAGACCGACCTG  
TCCGGTGCCCTGAATGAACCTGAGG  
ACGAGGCAGCGGGCTATCGTGGCTGGCCACGACGGCGTTCCCTGCGCAGCTG  
TGCTCGACGTTGTCAGTGAAGCGGA  
AGGGACTGGCTGCTATTGGCGAAGTGCCGGGCAGGATCTCCTGTCATCTCACC  
TTGCTCCTGCCAGAAGTATCCAT  
CATGGCTGATGCAATGCCGGCTGCATACGCTTGATCCGGCTACCTGCCATT  
GACCACCAAGCGAAACATCGCATCG  
AGCAGACCGTACTCGGATGGAAGCCGGCTTGTCGATCAGGATGATCTGGACG  
AAGAGCATCAGGGCTCGCGCCAGC  
GAACGTTCGCCAGGCTCAAGGCCGATGCCGACGGCGAGGATCTGTCGTG  
ACCCATGGCGATGCCCTGCTTGCCGAA  
TATCATGGTGGAAAATGGCGCTTCTGGATTCACTGACTGTGGCCGGCTGGGT  
GTGGCGGACCGCTATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGC  
TTGGCGGCGAATGGCTGACCGCTTCCCTGCTTACGGTATGCCGCT  
CCGATTGCGAGCGCATGCCCTCTACGCCCTTGTGACGAGTTCTGAGCGG  
GACTCTGGGTTGAAATGACCGAC  
CAAGCGACGCCAACCTGCCATCACGATGGCCGCAATAAAATATCTTATTTC  
TTACATCTGTTGGTTTTGT  
GTGAAGATCCGCGTATGGTGCACTCTAGTACAATCTGCTCTGATGCCGATAGT  
TAAGCCAGCCCCGACACCCGCCAACACCCGCTGACGCCCTGACGGGCT-

**FIG. 6B.**

TGTCTGCTCCGGCATCCGTTACAGACAAGCTGTGACCGTCTCCGGGAGCTGCA  
 TGTCAGAGGTTTCACCGTACACCGAAACGCGAGACGAAAGGGCTCGT  
 GATACGCCTATTTTATAGGTTAAT  
 GTCATGATAATAATGGTTCTTAGACGTCAAGGTGGCACTTTCGGGAAATGTGC  
 GCGGAACCCCTATTTGTTATTTT  
 CTAATACATTCAAATATGTATCCGCTCATGAGACAATAACCTGATAATGCTT  
 CAATAATATTGAAAAAGGAAGAGTA  
 TGAGTATTCAACATTCGGTGC CGCTTATTCCCTTTTGCGGCATTTGCCTT  
 CCTGTTTGCTCACCCAGAAACG  
 CTGGTGAAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGTTACATC  
 GAACCTGGATCTAACAGCGGTAAGAT  
 CCTTGAGAGTTTCGCCCGAAGAACGTTTCAATGATGAGCACTTTAAAGTT  
 CTGCTATGTGGCGGGTATTATCCC  
 GTATTGACGCCGGCAAGAGEAACTCGGTCGCCGCATAACACTATTCTCAGAATGA  
 CTTGGTTGAGTACTCACCGTCACA  
 GAAAAGCATCTAACGGATGGCATGACAGTAAGAGAATTATGCAGTGCTGCCATAA  
 CCATGAGTATAAACACTGCCCAA  
 CTTACTCTGACAACGATCGGAGGACCGAAGGAGCTAACCGCTTTTGACAAAC  
 ATGGGGGATCATGTAACTCGCCTTG  
 ATCGTTGGGAAACCGGAGCTGAATGAAGCCATACCAAACGACGAGCGTGACACCA  
 CGATGCCCTGTAGCAATGGCAACAACG  
 TTGCGCAAACATTAACTGGCGAACTACTTACTCTAGCTCCGGCAACAATTAA  
 TAGACTGGATGGAGGGCGATAAAAGT  
 TGCAGGACCACCTCTGGCTCGGCCCTCCGGCTGGCTGGTTATTGCTGATAAA  
 JCTGGAGCCGGTGGCTGGTCTC  
 GCGGTATCATTGCAAGCACTGGGGCAGATGGTAAGCCCTCCGTATCGTAGTTAT  
 CTACACGACGGGGAGTCAGGCAACT  
 ATGGATGAACGAAAATAGACAGATCGCTGAGATAGGTGCCTCACTGATTAAGCATT  
 GGTAACTGTCAAGACCAAGTTACTC  
 ATATATACTTTAGATTGATTAAAACCTCATTTTAATTAAAAGGATCTAGGTGA  
 AGATCCCTTTGATAATCTCATGA  
 CCAAAATCCCTTAACGTGAGTTTCGTTCCACTGAGCGTCAGACCCGTAGAAAA  
 GATCAAAGGATCTTCTTGAGATCCT  
 TTTTTCTGCGCTAATCTGCTGCTGCAAACAAAAAACCCACCGCTACCAGCGG  
 TGGTTTGTGGCCGGATCAAGAGCT  
 ACCAAACTCTTTTCCGAAGGTAACCTGGCTTCAGCAGAGCGCAGATAACAAACT  
 GTCTTCTAGTGTAGCCGTAGTTAG  
 GCCACCACTCAAGAACCTCTGTAGCACCGCCTACATACCTCGCTCTGCTAATCCT  
 GTTACCACTGGCTGCTGCCAGTGGCGATAAGTCGTGCTTACCGGGTTGGACTCA  
 AGACGATAGTTACCGGATAAGCGCAGCGGTGGCTGAACGGGGGTTC  
 GTGCACACAGCCCAGCTGGAGCGAACGACCTACACCGAAGTGAACGATACCTACA  
 GCGTAGAGTATGAGAAAGCGGCCACCG  
 TTCCCGAAGGGAGAAAGCGGAGACAGGTATCCGGTAAGCGGCAGGGTCGGAACAG  
 GAGAGCGCAGAGGGAGCTTCCAGGG  
 GGAAACGCCCTGGTATCTTATAGTCTGCTGCGGTTTCGCCACCTCTGACTTGAGC  
 GTCGATTTTGATGCTCGTCAGG  
 GGGCGGAGCCATGGAAAAACGCCAGCAACGCCCTTTTACGGTTCTGGC  
 CTTTGCTGGCCTTTGCTCACATGG  
 CTCGAC3'

**FIG. 6C.**

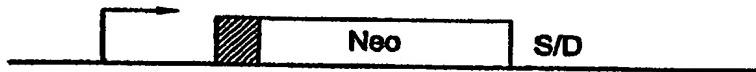
5'AGATCTTCAATATTGCCATTAGCCATTATTCTGGTTATAGCATAAATC  
AATATTGGCTATTGGCATTGCT  
ACGTTGTATCTATATCATATAATATGACATTATATTGGCTATGTC  
GCCATGTTGCATTGATTATGAC  
TAGTTATAATAGTAATCAATTACGGGGTCAATTAGTTCAAGCCC  
TTCCCGCTTACATAACTACGGTAA  
ATGGCCCCGCTGGCTGACCGCCCCACGACCCCCGCCATTGAC  
GTATGTTCCCATACTAACGCAATA  
GGGACTTTCCATTGACGTCAATGGTGGAGTATTTACGGTAA  
ACTGCCCACCTGG  
CAGTACATCAAGTGTATCATATGCC  
AAGTCCGCCCCCTATTGACGTCAATGACGGTAAATGGCCC  
CAGTACATGACCTTAACGGGACTTC  
CTACTTGGCAGTACATCTACGTATTAGTCATCGCTATTACCA  
TTGGCAGTACACCAATGGCGTGA  
TAGCGGTTTGACTCACGGGATTCCAAGTCTCCACCCATTGAC  
GTATGTTTGCGACCAAAATCAACG  
GGACTTTCCAAAAATGTCGTAAACA  
ACTGCGATCGCCGCCGCTGGTGA  
GGCGTAGGGCTGTACGGTGGGAGG  
CTATATAAGCAGAGCTCGTTAGTGAACCGTCAGATCA  
CTAGTTTATCACAGTAAATTGCTA  
ACGCAGTCAGTGTCTGACACA  
ACTGACTCTCT  
TAATTAACTCCACCAGTCTACTTC  
AGTTCCCTTGCCTCCACCA  
ATCAAAGAGGAAACCAACCC  
AGATGAGCTTCCATGTA  
AAATTGAGCCAGCTCCAAAG  
ATTACGAATGCCTGGAAACCTGGGTGCCTGGG  
TCAGGACATCAACTGGACA  
TTCTAGTTCAAATGAGTGA  
TATTGACGATAAAAATGGGAAA  
AGAAAAGAGAAAGAGACTTCAAGG  
AAAAAGATA  
ACCCGATGATCAGGATATCTACAG  
GTATCAATATGATACAAA  
AGATTCAAGAGAGGGTCT  
AAAGATCTCTGGACTTG  
ACTGACCCCGA  
AAGATGGGAAACATCT  
CAGGGGT  
CAGCAGG  
ACAGCAGGG  
GAGAAAGGG  
GCCCGCT  
TAAGGAG  
TGTGAG  
GCGGGA  
CTATCGT  
AAATTG  
ACACAAC  
GAGCT  
GCGATG  
TGATGAG  
FIG. 7A.

TTTATTTGTGAAATTGTGATG  
 CTATTGCTTATTGTAAACCATATAAGCTGCAATAA  
 ACAAGTTAACAAACAATTGCATTCTATTTATGTTAGGTTAGGGGGAGATG  
 TGGGAGGTTTTAAAGCAAGTAAA  
 ACCTCTACAAATGTGTAACCGATAAGGATGATTCCGGAGCCTGAATGGCG  
 AATGGACGCCGCCCCGTCAGCGCGA  
 TTAAGCGCGGCGGGTGTGGTGGTACCGCACGTGACCGCTACACTTGCCAGCGC  
 CCTAGCGCCGCTCTTCGCTTC  
 TTCCCTCTTCTCGCCACGTCGCCGGCTTCCCCGTCAGCTCAAATCGGGG  
 GCTCCCTTAGGGTCCGATTAG  
 TGCTTTACGGCACCTCGACCCCCAAAAAAACTTGATTAGGGTGTGTTACGTAGT  
 GGGCCATCGCCCTGATAGACGGTT  
 TTGCGCCCTTGACGTTAGTCCACGTTAAATAGTGGACTCTGTTCCAAACT  
 GGAACAAACACTCAACCTATCTG  
 GTCTATTCTTTGATTTAAAGGGATTTGCCGATTCGGCCTATTGGTTAAAAAA  
 TGAGCTGATTTAAACAAAAATTAA  
 CGCGAATTAAACAAATATTAAACGCTTACAATTCGCGCTGTGTACCTTCTGAGG  
 CGGAAAGAACCGCTGTGGAAATGTG  
 TGTCAGTTAGGGTGTGGAAAGTCCCGAGGCTCCCGAGGAGAAGTATGCAA  
 AGCATGCATCTCAATTAGTCAGAAC  
 CAGGTGTGAAAGTCCCGAGGCTCCCGAGGAGAAGTATGCAAAGCATGCA  
 TCTCAATTAGTCAGCAACCATAGTCC  
 CGCCCTAACTCCGCCATCCCGCCCTAACCTCCGCCAGTTCCGCCATTCTCC  
 GCCCCATGGCTGACTAATT  
 ATTATGCAAGGGCGAGGCCGCTCGGCCTTGAGCTATTCCAGAAGTAGTGAG  
 GAGGCTTTTGGAGGCCCTAGGCTT  
 TTGCAAAAAGCTTGATTCGACACAAACAGTCTGAACCTAAGGCTAGAGCCA  
 CCATGATTGAAAGATGGATTGCA  
 CGCAGGTTCTCCGCCGCTTGGGTGGAGAGGCTATTGGCTATGACTGGCACAA  
 CAGACAATCGGCTGCTTGCG  
 CCGTGTTCGGCTGTCAGCGAGGGCGCCGGTTCTTTGTCAAGACCGACCT  
 GTCCGGTGCCTGAATGAACTGCA  
 GACGAGGCAGCGCGCTATCGTGGCTGGCCACGACGGCGTTCTTGCGCAGCT  
 GTGCTCGACGTTGTCAGTGAAGCGGG  
 AAGGGACTGGCTGCTATTGGCGAAGTGCCGGGGCAGGATCTCCTGTCACTCAC  
 CTGGCTCTGCCAGAAAGTATC  
 TCATGGCTGATGCAATGCGGCCGCTGCATACGCTTGATCCGGCTACCTGCCATT  
 CGACCACCAAGGAAACATCGCATC  
 GAGCGAGCACGTAATCGGATGGAAGCCGGCTTGTCGATCAGGATGATCTGGAC  
 GAAGAGCATAGGGCTCGGCCAGC  
 CGAAACTGTCGCCAGGCTCAAGGCCGATGCCGACGGCGAGGATCTCGTCGT  
 GACCCATGGCGATGCCCTGCTTGCGA  
 ATATCATGGTGGAAAATGGCCGCTTCTGGATTATCGATGTGGCCGGCTGG  
 TGTCGGACCGCTATCAGGACATA  
 GCGTTGGCTACCCGTGATATTGCTGAAGAGCTTGGCGGGCAATGGGCTGACCGCT  
 TCCCTCGTCTTACGGTATCGCCGC  
 TCCGATTGCGAGCGCATGCCCTTATGCCCTTGACGAGTTCTCTGAGCC  
 GGACTCTGGGTTGAAATGACCGA  
 CCAAGCGACGCCAACCTGCCATCACGATGGCCGAATAAAATATCTTATTTC  
 ATTACATCTGTGTGTTGGTTTGTCAGGATCCGCGTATGGTGCACCTC-

**FIG. 7B.**

AGTACAATCTGCTCTGATGCCGCATAGTTAAGCCAGCCCCGACACCCGCCAA  
CACCGCTGACGCGCCCTGACGGCTTGCTGCTCCGGCATCCGCTTACAGACA  
AGCTGTGACCGTCTCCGGAGCTGC  
ATGTGTCAAGGTTTCACCGTCATCACCAGAACGCGCAGACGAAAGGGCTCG  
TGATACGCCATTTTATAGGTTAA  
TGTATGATAAATGGTTCTAGACGTCAGGTGGCACTTTGGGAAATGTG  
CGCGGAACCCCTATTGTTTATT  
TCTAAATACATTCAAAATGTATCCGTCATGAGACAATAACCTGATAAATGCT  
TCAATAATATTGAAAAGGAAGAGT  
ATGAGTATTCAACATTCCGTCGCCCCTATTCCCTTTTGC GGCACTTGCCT  
TCCCTTTTGCTCACCCAGAAC  
GCTGGTGAAGTAAAAGATGCTGAAGATCAGTTGGGTGCACGAGTGGTTACAT  
CGAACCTGGATCTAACAGCGGTAGA  
TCCTTGAGAGTTTCGCCCCGAAGAACGTTTCAATGATGAGCACTTTAAAGT  
TCTGCTATGTGGCGGGTATTATCC  
CGTATTGACGCCGGCAAGAGCAACTCGGTGCGCGCATACACTATTCTAGAATG  
ACTTGGTTGAGTACTCACCAAGTCAC  
AGAAAAGCATTTACGGATGGCATGACAGTAAGAGAATTATGAGTGTGCCATA  
ACCATGAGTGATAACACTGCGGC  
ACCTACTCTGACAACGGATCGGAGGACCGAAGGGAGCTACCGCTTTTGACAA  
CATGGGGATCATGTACTCGCCCT  
GATCGTTGGGAACCGGGCTGAATGAAGGCCATACCAAACGAGCGGTGACACC  
ACGATGCCGTAGCAATGGCAACAAAC  
GTTGCGAAACTATTAACTGGCGAACTACTTACTCTAGCTTCCGGCAACAAATTA  
ATAGACTGGATGGAGGGGGATAAAG  
TTGCAAGGACCACTCTGCGCTCGGCCCTCCGGCTGGTTATTGCTGATAA  
ATCTGGAGCCGGTGAAGCGTGGGTCT  
CGCGGTATCATGGAGCACTGGGGCCAGATGGTAAGCCCTCCGTATCGTAGTTA  
TCTACACGACGGGGAGTCAGGCAAC  
TATGGATGAACGAAATAGACAGATCGTGAGATAGGTGCCTCACTGATTAAGCAT  
TGGTAACTGTCAGACCAAGTTACT  
CATATATACTTAAAGATTAAACTTCATTTTAAATTAAAGGATCTAGGTG  
AAGATCCTTTGATAATCTCATG  
ACCAAAATCCCTAACGTGAGTTTCGTTCCACTGAGCGTCAGACCCCGTAGAAA  
AGATCAAAAGGATCTTCTGAGATCC  
TTTTTCTGCGCTAACCTGCTTGCAAACAAAAAAACCCACCGCTACCGCG  
GTGGTTTGTGCGGATCAAGAGC  
TACCAACTTTTCCGAAGGTAACTGGCTTCAGCAGAGCGCAGATAACAAATAC  
TGTCTTCTAGTGAGCGTAGTTA  
GGCACCAACTCAAGAAACTCTGTAAGCACCGCCATACACTCGCTCTGCTAACCC  
TGTACCACTGGCTGCGTGG  
CGATAAGCTGTCTTACCGGGFTGACTCAAGACGATAGTTACCGGATAAGCG  
CAGCGGTGGCTGAACGGGGGT  
CGTCACACAGCCCAGCTTGGAGCGAACGACCTACACCGAACTGAGATACCTAC  
AGCGTGAAGCTATGAGAAAGCGCCACGCTTCCCGAAGGGAGAAAGGGCGACAGGT  
ATCCGGTAAGCGGCAGGTGCGAACAGGAGAGCGCACGAGGGAGCTTCCAGG  
GGGAAACGCCCTGGTATCTTATAGTCTGTCGGTTTCGCCACCTCTGACTTGAG  
CGTCGATTTTGATGCTCGTCAG  
GGGGCGGAGGCTATGGAAAAACGCCAGCAACGCCGGCTTTTACGGTTCTGG  
CCTTTGCTGGCTTTGTCACATGGCTCGAC3

**FIG. 7C.**



**FIG. 8A.**



**FIG. 8B.**



**FIG. 8C.**



**FIG. 8D.**



**FIG. 8E.**



**FIG. 8F.**

FIG. 9A.



FIG. 9B.



FIG. 9C.



FIG. 9D.

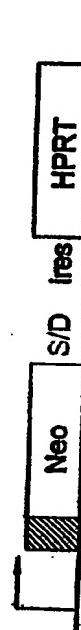


FIG. 9E.

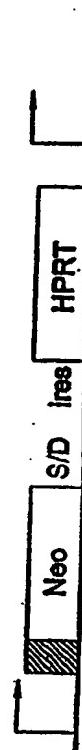
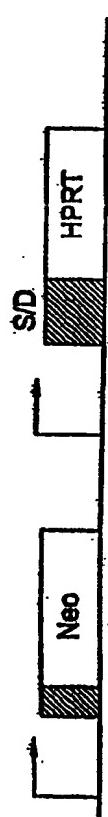
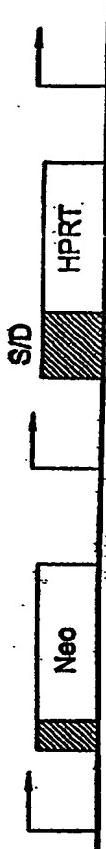
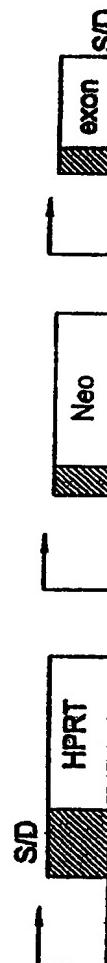


FIG. 9F.



FIG. 10A.FIG. 10B.FIG. 10C.FIG. 10D.FIG. 10E.FIG. 10F.

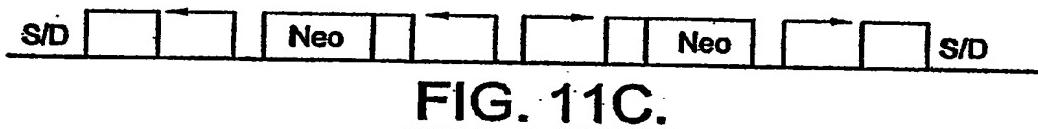
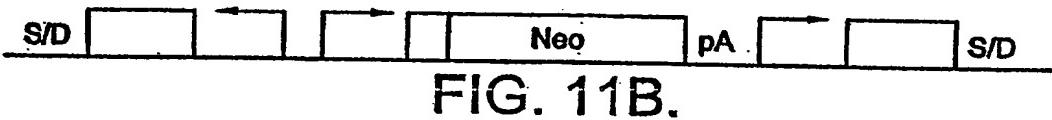
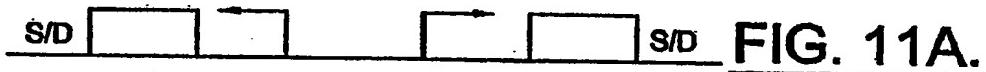




FIG. 12A.

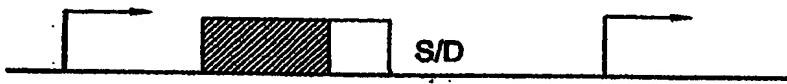


FIG. 12B.



FIG. 12C.

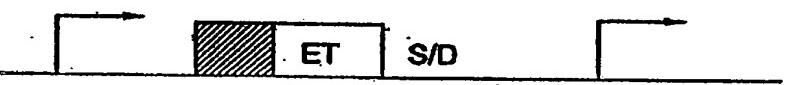


FIG. 12D.

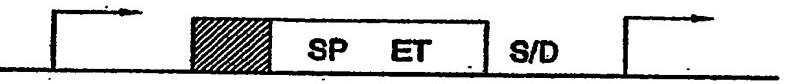


FIG. 12E.

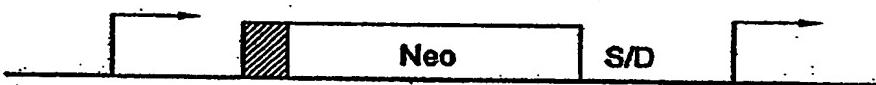


FIG. 12F.

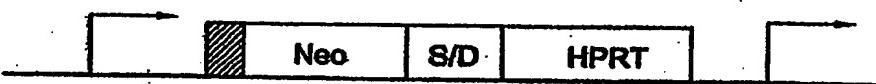
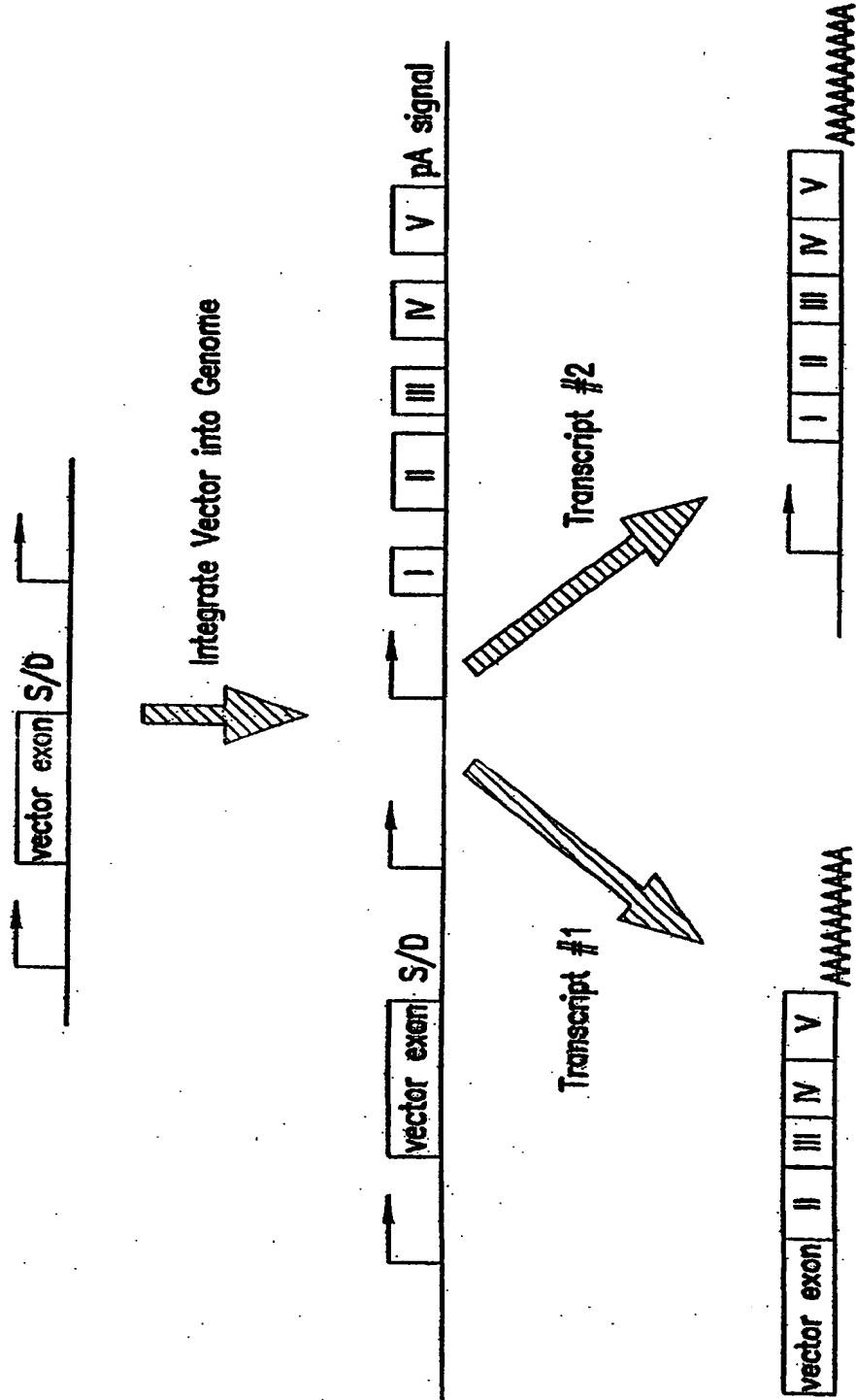


FIG. 12G.



**FIG. 13.**

FIG. 14A.

GTCCCCGCCCTAACTCCGCCATCCGCCCTAACCTCCGCCAGTTCGCCATTCTCCGCC  
 ATGGCTGACTAACTTTTTTATTTATGCAAGAGGCCAGGGCGCTCGGCCCTGAGCTATTCC  
 AGAAGTAGTGAGGAGGCTTTTTGGAGGCCTAGGCTTTGCAAAAAGCTTGATTCTGACA  
 CAACAGTCTGAACCTAACGGCTAGAGCACCCATGATTGAAACAAAGATGGATTGACCGAGGT  
 CTCCGCCCTGGCTGGGTGGAGGCTATTCGCGCTAGACTGGCAGAACAGACAATGGCTGC  
 TCTGATGCCGCCGTGGCCCTGTCAGCGCAGGGGCCGGCTTGTCAAGAACGAC  
 CTGTCCGGGCCCTGAATGAACTGCAGGACGAGGCCAGCGCCGCTATCGTGCTGGCCACGAC  
 GGGCGTCTCGCGCAGCTGTGCTGACGTTGCACTGAAGCGGAAGGGACTGGCTGCTATT  
 GGGCGAAGTGCAGGGAGGATCTCTGCTGCACTCACCTGCTCTGCCGAAGAAAGTATCCAT  
 CATGGCTGATGCAATGCGGGGCTGCAACGGCTTGTGACGCGCTACCTGCCCATTCGACCACCA  
 AGCGAAACATCGCATGAGGAGCACGACTCGGATGGAAGCGGCTTGTGCAATCAGGATG  
 ATCTGGACGAAGAGCATCAGGGGCTCGGCCAGCGAACTGTTGCCAGGCTCAAGGCCGC  
 ATGCCCGACGGAGGATCTGFCGTGACCCATGGCGATGCCGCTTGCCGAATATCATGGTG  
 GAAAATGGCGCTGGGATGGCTACCGGTGATATTGCTGAAGAGCTTGGCGGACCGCTATCAG  
 GACATAGCGTGGCTACCGGTGATATTGCTGAAGAGCTTGGCGGGAATGGCTGACCGCTTC  
 CTCGTCTTACGGTATCGCCGCTCCCGATTGCGAGCGCATCGCTTCTATGCCCTTGTGACG  
 AGTCTCTGAGCGGGACTCTGGGTTGAAATGACCGACCAAGCGACGCCAACCTGCAT  
 CACGATGGCGGAATAAAATATCTTATTTCATTACATCTGTGTTGGTTTGTGTAAG  
 ATCCCGTATGGTGCCTACTCTCAGTACAATCTGCTGATGCCGATAGTAAAGCCAGCCCCGA  
 CACCCGCCAACACCCCGCTGACCGGCCCTGACGGGCTTGTCTGCCCTACCGCTTACAGA  
 CAAGCTGTGACCGCTCCGGGAGCTGATGTCAGGGTTTCAACCGTCAATACCGAAAACGC  
 GCGAGACGAAAGGGCTCGTATACGCCATTTCAGGTTAATGTCATGATAATAATGGTT  
 TCTTACGGTCAAGTGGCACTTGTGGGAAATGTCGGGAAACCCATTGGTTTGTGTAAG  
 AAAATGCAATTATGATCCGCTATGAGACAATAACCGTGAATAATGCTTCAATAATATT  
 GAAAAGGAGAGATGAGTATTCAACATTCCGTGCGCCCTTCCCGCTTGGGCGAT  
 TTGCGCTTCCGTGTTTGTCAACCCAGAAACGCTGGTGAAGTAAAAGATGCTGAAAGATCAGT  
 TGGTGCACGATGGTACATGAACTGGATCTCACAGCGGTAAGATCCCTGAGAGTTTC  
 GCCCCGAGAACGTTTCAATGAGAGCACTTAAAGTCTGCTATGFGGGCGGTATTAT  
 CCCGTATTGACGCCGGCAAGACCAACTCGTCGCCGATACACATTCTCAGAATGACTTGG  
 TTGAGTACTCACCAGTCACAGAAAAGCATCTTACCGATGGCTACAGTAAGAGAATTATGC  
 AGTGCCTGCCATAACCATGAGTGATAACACTGCGGCCAACCTACTTCTGACAAACGATCGGAGC  
 ACCGAAGGAGCTAACCGCTTTTGCAACACATGGGGGATCATGTAACCTGCCCTGATCGTTG  
 GGAACCCGAGCTGAATGAGGCCATACCAACGACGAGCGTACACCGAGATGCCGTAGCAA  
 TGGCAACAACTTGGCAACTTAACTTGGCGAACTACTTACTTACGTTCCCGGCAACAAAT  
 TAATAGACTGGATGGAGGGCGATAAAAGTTCAGGACCACTTCTGEGCTGCCCTTCCGGCT  
 GGCTGGTTTATGCTGATAAAATCTGGAGGGCGTGAGCGTGGGTCTCGCGTATCATGGCA  
 CTGGGCCAGATGTAAGCCCTCCGTATGGTAGTACAGGCTTACACAGACGGGAGTCAGGCAAC  
 TATGGATGAAAGGAAATAGACAGATGGCTGAGATAGGTGCGCTACTGATTAAGCATTGGTAAC  
 TGTCAGCAAGTACTCAATAACTTAACTTAACTTCAATTAAATTAAAG  
 GATCTAGGTAAGATGCTTTTGATTAATCTGACCAAAATCCCTTAACGTTGAGTTTCTGTT  
 CCACCTGAGCGTCAAGACCCCGTGAAGAAGATCAAGGATCTTCTGAGATCTTCTGCG  
 CGTAATCTGCTGCTTGCACACAAABACCCGCTACAGCGTACAGCGGTTGTTGCGGATCA  
 AGAGCTACCAACTTTCGCAAGGTAACCTGCTGAGATAGGTGCGCTACTGATTAAGCATTGGTAAC  
 CCTTCTAGTGTAGCGTAGTTAGGGCACCAACTTCAAGAAACTCTGTAACCGCCTACATACCT  
 CGCTCTGCTAACTCTGTTACCGATGCTGCTGCCAGTGGCGATAAGTCGTTCTTACCGGGT  
 GGACTCAAGACGATAGTTACCGATAAGCGCAGCGTGGGGCTGAACGGGGGGTTCTGTC  
 CACAGGCCAGCTGGAGCGAACGCCATACCGGAACCTGAGATACCTACAGCGTGAAGCTATGA  
 GAAAGCGCCACGCTCCCGAGGGAGAAAGCGGACAGGTATCCGGTAAGCGGAGGGCTCG  
 GAACAGGAGAGCGCACGAGGGAGCTTCAAGGGGAAACGCCCTGGTATCTTATAGTCCTGTC  
 GGGTTTGGCCACCTCTGACTTGGCGTCGATTTTGTGATECTCGTCAGGGGCGGAGGCTA  
 TGGAAAAACGCCAGCAACGCCCTTTTACGGTTCTGGCTTTGCTGGCTTTGCTAC  
 ATGGCTGAC

**FIG. 14B.**

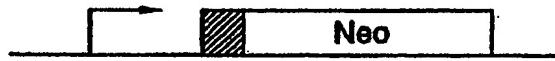
**FIG. 15A**

CTATTGGCGAAGTGCCGGGGCAGGACTCTCTGTCACTCACCTTGCTCCTGCCGAGAAAGTA  
TCCATCATGGCTGATGCAATGCCGGCGCTGCATAACGGCTTGATCCCGTACCTGCCATTGAC  
CACCAAGCGAAACATCGCATCGAGCGAGCACGTACTCGGA TGGAAGCCGGCTTGTGCGATCA  
GGATGATCTGGACGAAGAGCATCAGGGCTCGCGCCAGCCGAACCTGTTGCCAGGCTCAAGG  
CGCGCATGCCCGACGGCGAGGATCTCGTGGATGCCATGCCGATGCCATGCCATGCCGATGCC  
TGGTGAAAATGGCCGCTTTCTGGATTCACTCGACTTGCCCGCTGGGTGTTGGCGGACCGCT  
ATCAGGACATAGCGTTGGCTACCCGTGATATTGCTGAAGAGCTGGCGGGGAATGGGCTGAC  
CGCTTCCTCGTGCTTTACGGTATCGCGCTCCCGATTGCGAGCGATCGCCCTTATCGCCCTTC  
TTGACGAGCGCTGCTGGCTGGCCGCTAACCTGGTGTGACTTAATTGAGATGCACTGCTT  
GCATACCTCTGCCCTGCTGGGAGCCTGGGACTTTCCACACCCCTAACCTGACACACATTCACA  
GCTGGCTTCCGCTCAGAAGGTACACAGGCAGAAATTGTAAGCGTTAATATTTGTTAAAA  
TTCGCGTTAAATTTGTTAAATCAGCTCACTTAAACCAATAGGCCGAAATCGGCAAAATC  
CCTTATAAAATCAAAGAATAGACCGAGATAGGGTTGAGTGTGTTCCAGTTGGAAACAAGAG  
TCCACTATTAAGAACGCTGGACTCCAACGTCAAAGGGCGAAAAACCGTATCAGGGCGATG  
GCCAC

**FIG. 15B.**

**FIG. 16A.**

**FIG. 16B.**



**FIG. 17A.**



**FIG. 17B.**



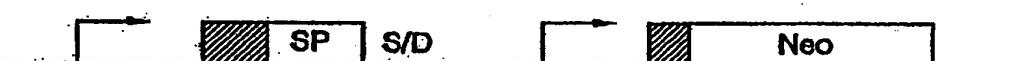
**FIG. 17C.**



**FIG. 17D.**



**FIG. 17E.**



**FIG. 17F.**



**FIG. 17G.**

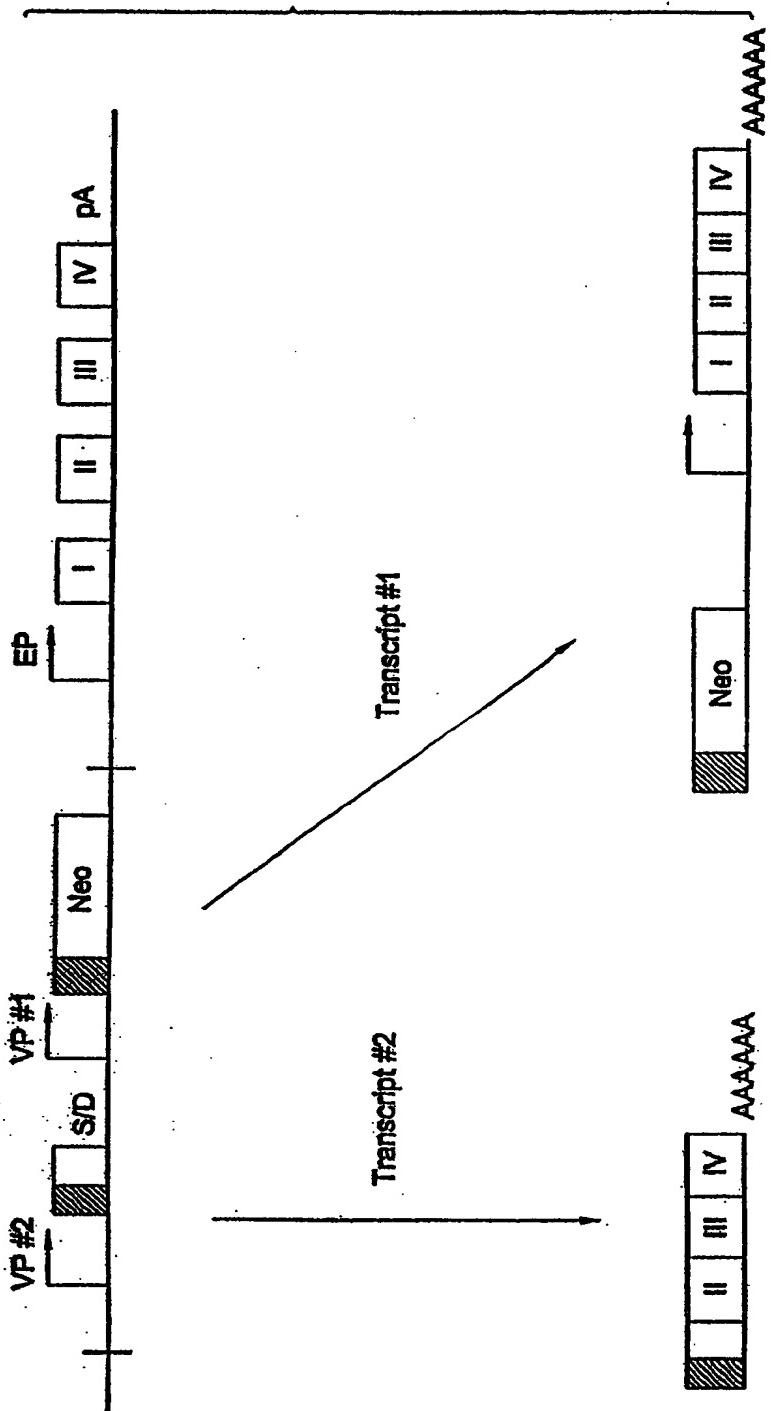


FIG. 18.

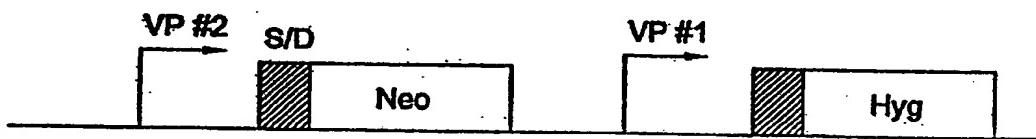


FIG. 19.

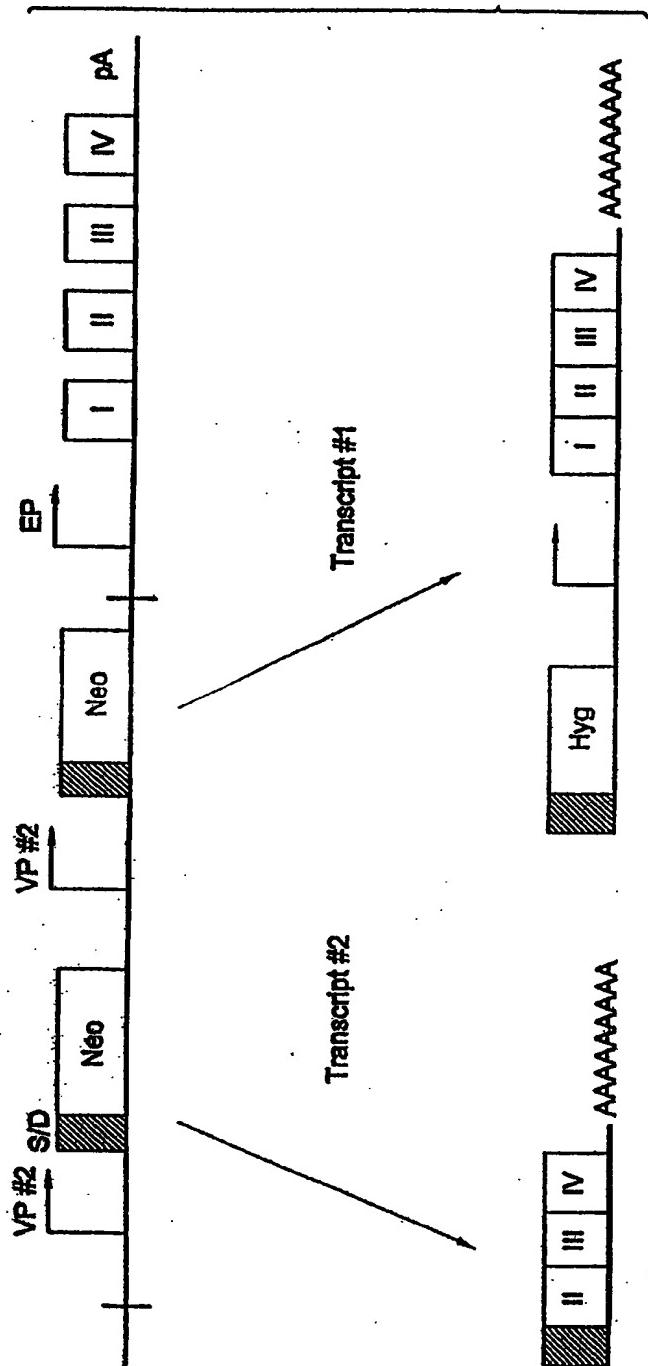


FIG. 20A.

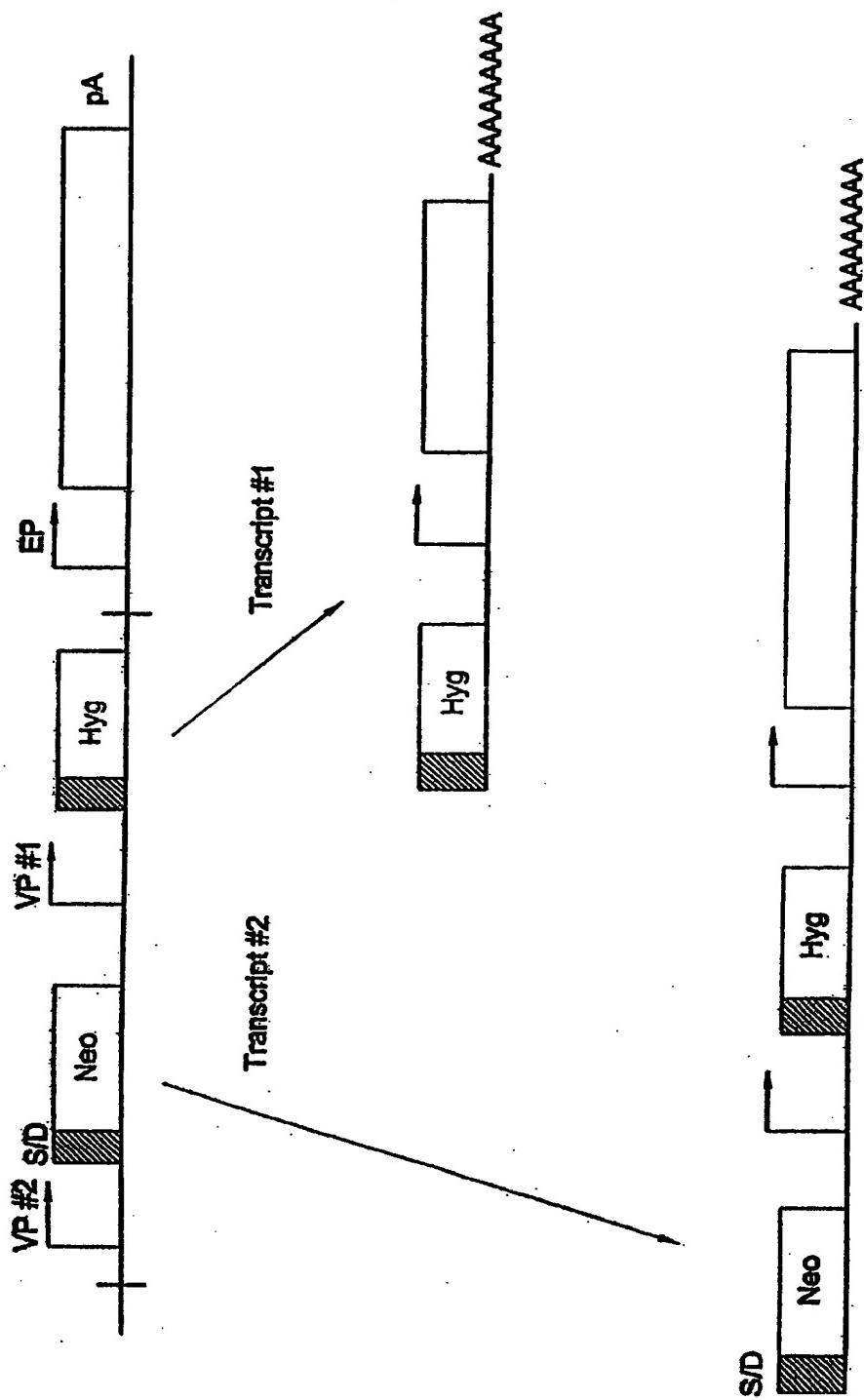
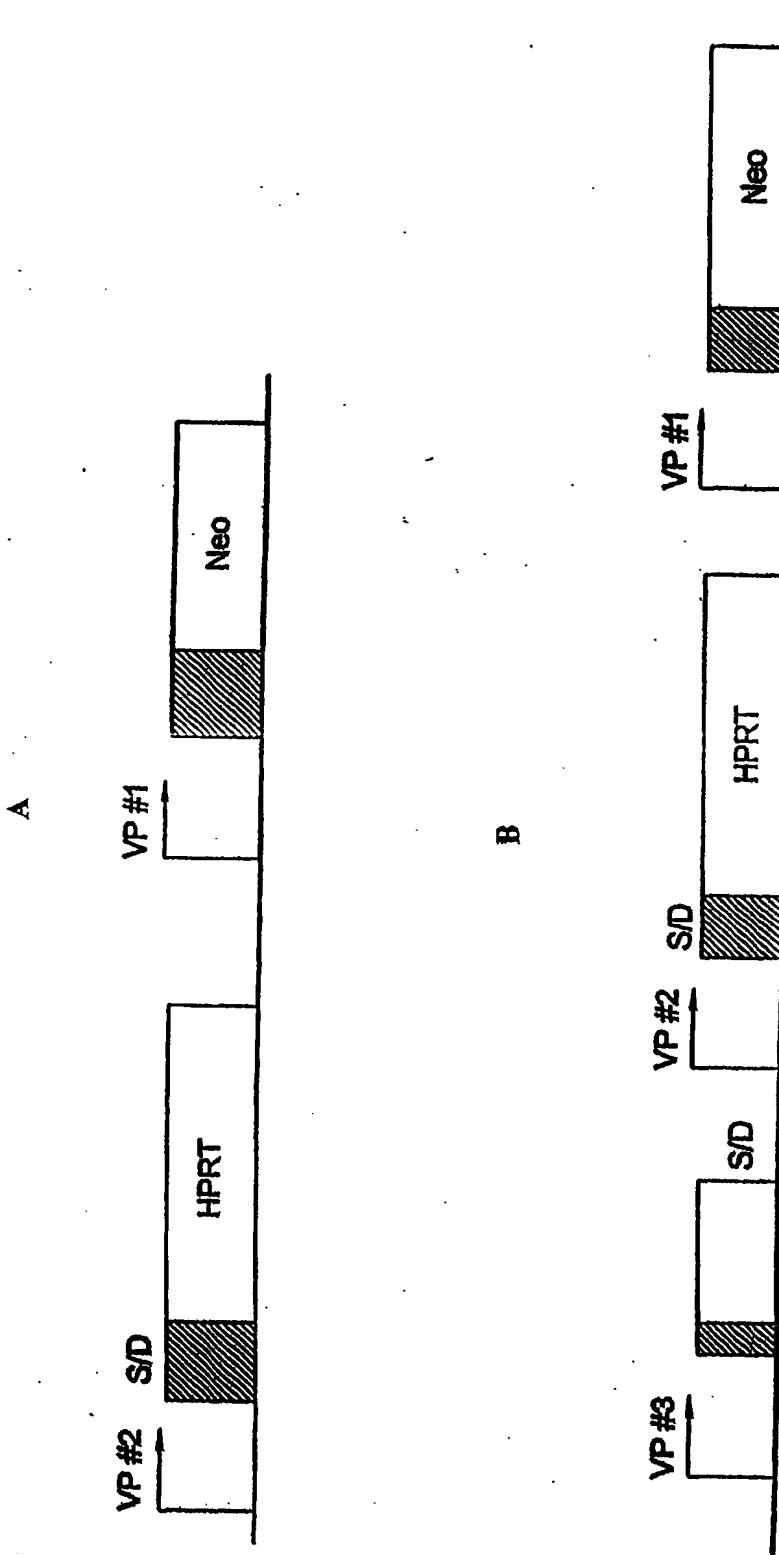


FIG. 20B.

FIG. 21.

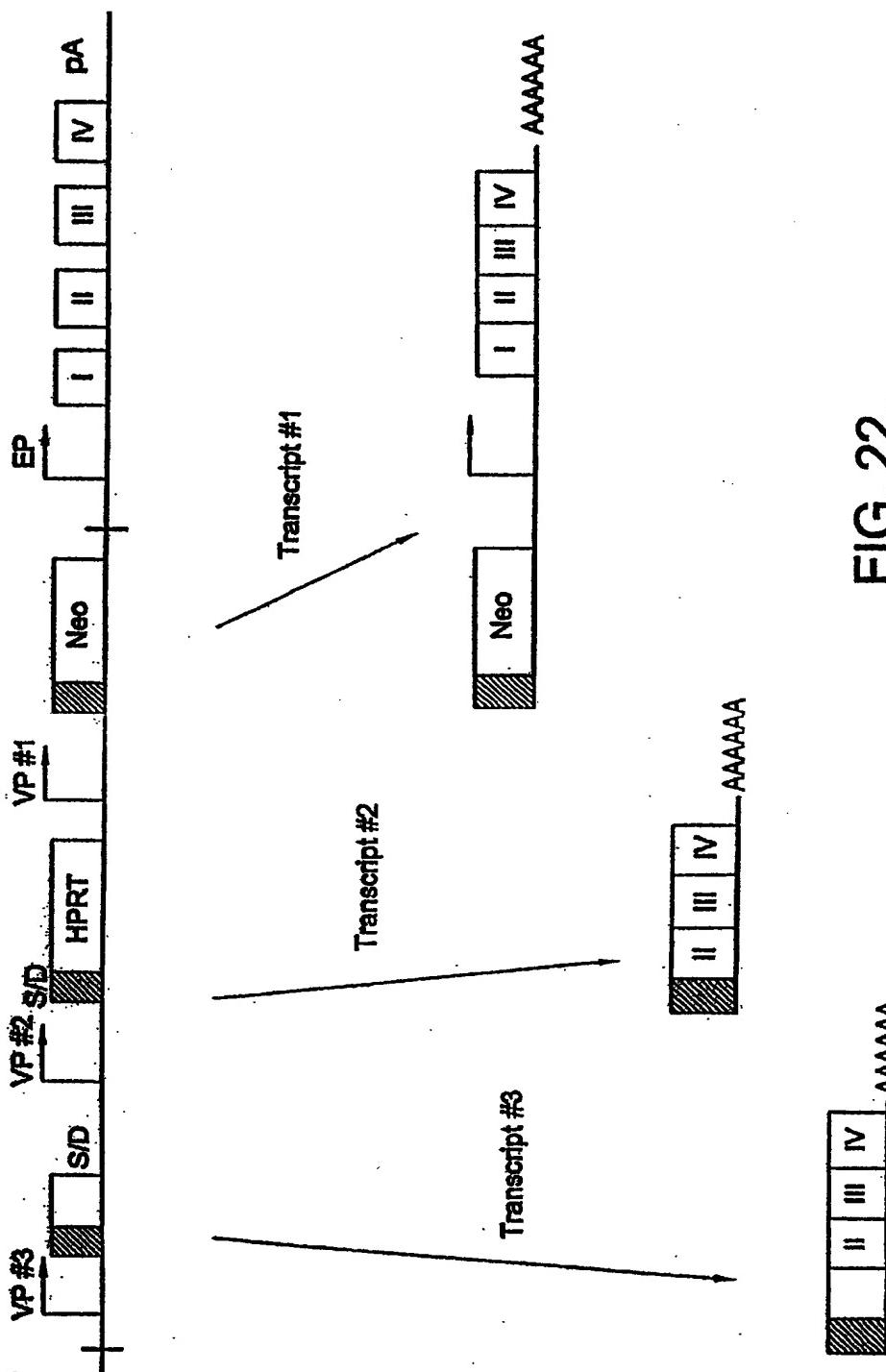
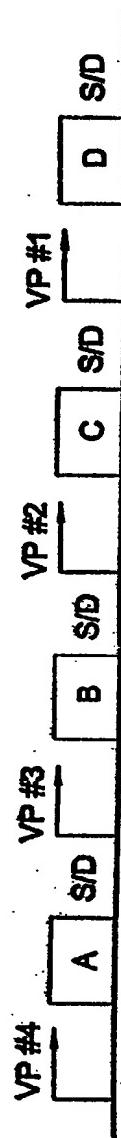
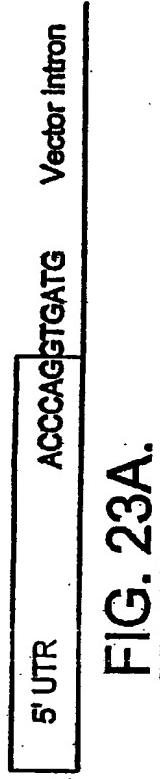


FIG. 22.



## Exon A and Flanking Intron



**FIG. 23A.**

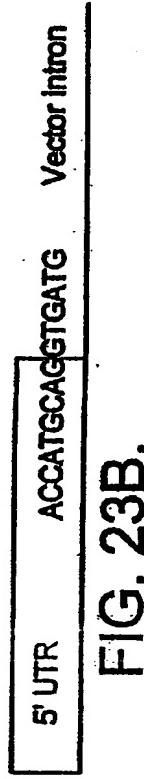
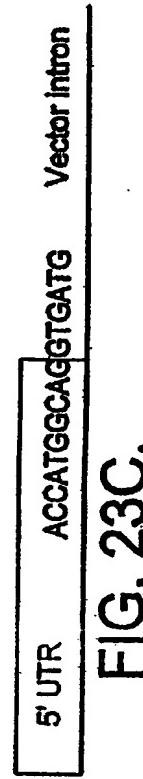


FIG. 23B.



**FIG. 23C.**

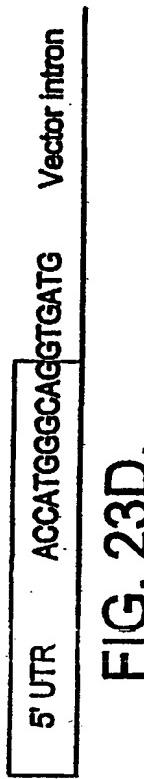


FIG. 23D.

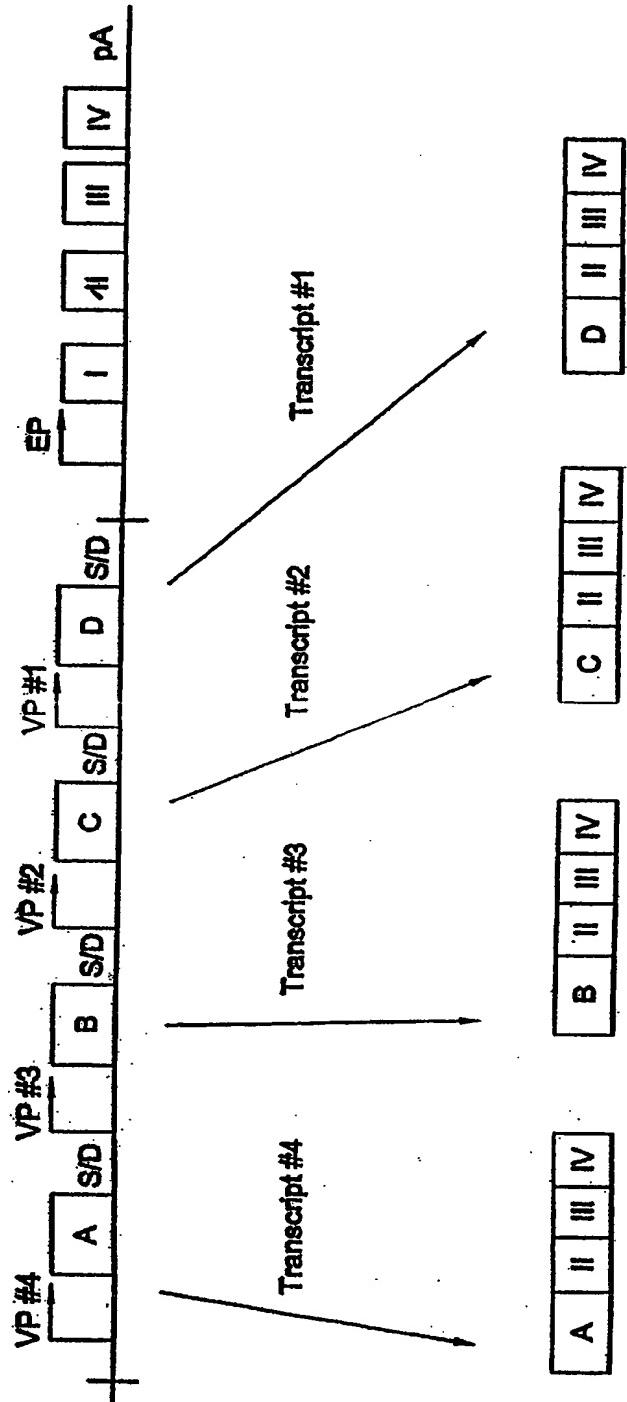


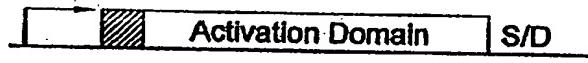
FIG. 24.



**FIG. 25A.**



**FIG. 25B.**



**FIG. 25C.**



**FIG. 25D.**

Gene A

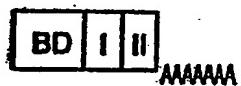


FIG. 26.

Gene B



Transcription and Splicing

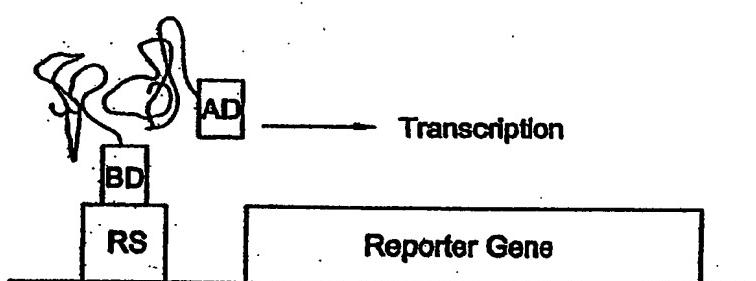


Translation



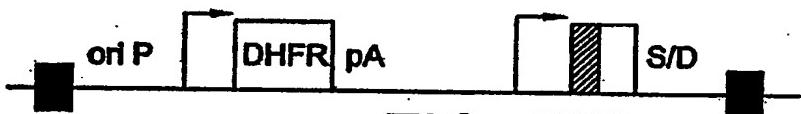
Detection of Protein Interaction

Transcription

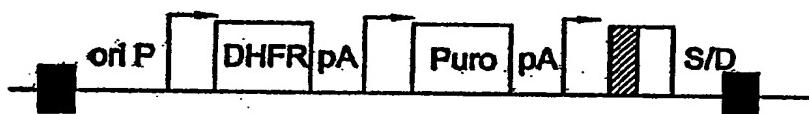




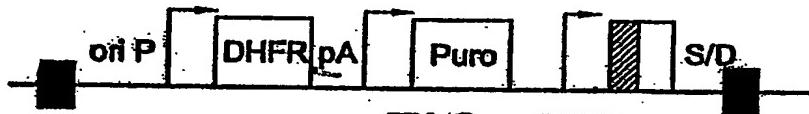
**FIG. 27A.**



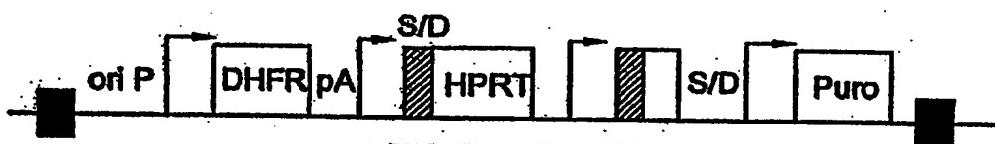
**FIG. 27B.**



**FIG. 27C.**



**FIG. 27D.**



**FIG. 27E.**

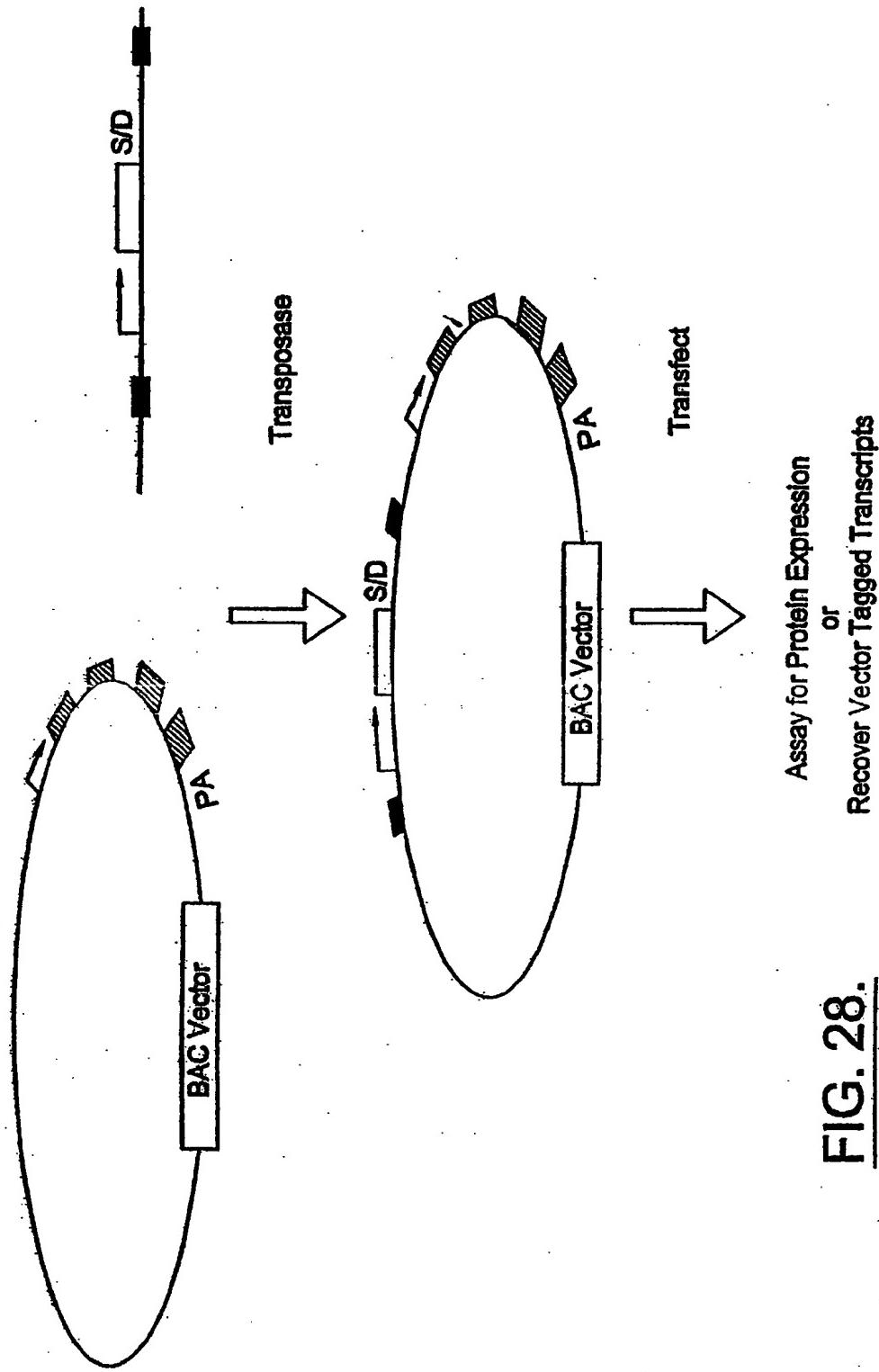


FIG. 28.

**FIG. 29A.**

GGTGATGCCGGCCACGATGCGTCCGGCGTAGAGGATCCACAGGACGGGTG  
TGGTCGCCATGATCGCTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGC  
AGGACTGGGCGGCGGCAAAGCGGTCGGACAGTGCTCCGAGAACGGGTGC  
GCATAGAAATTGCAACGCATATAGCGCTAGATCCTGCTAGAGTCGAG  
GCCGCCACCGCGGTGGAGCTCCAGCTTTGTCCTTCTGTGGTAAATTGTTA  
TTCGAGCTTGGCGTAATCATGGTCAGCTGTTCTGTGGTAAATTGTTA  
TCCGCTACAATTCCACAAACATAACGAGGCCGAAGCATAAAGTGTAAAG  
CCTGGGGTGCCTAATGAGTGAGCTAACTCACATTAAATTGCGTTCGCTCAC  
TGCCCCGCTTCCAGTCGGAAACCTGTCGTGCCAGCTGCATTAATGAATCC  
GCCAACGCGCGGGAGAGGGCGTTGCGTATTGGGCGCTTCCGCTTCC  
CGCTCACTGACTCGCTGCGCTCGGTGTTGGCTGCGGCGAGCGGTATCAG  
CTCACTCAAAGGCGGTAAACGGTTATCCACAGAAACAGGGATAACGCA  
GGAAAGAACATGTGAGCAAAAGGCCAGCAAAAGGCCAGGAACCGTAAAAA  
AGGCCGCGTTGCTGGCTTTTCCATAGGCTCCGCCCCCTGACGAGCAGCAG  
ACAAAAAATCGACGCTCAAGTCAGAGGTGGCGAAACCCGACAGGACTATAA  
AGATACCAGGCGTTCCCCCTGGAAGCTCCCTCGTGCCTCTCCTGTTCCG  
ACCCCTGCCGCTTACCGGATACCTGTCGCCCTTCTCCCTTCGGGAAGCGTG  
GCGCTTCTCATAGCTCACGCTGTAGGTATCTCAGTTGGTGTAGGTGTT  
CGCTCCAAGCTGGCTGTTGCAAGAACCCCCCGTTAGCCCCGACCGCTGC  
GCCTTATCCGGTAACCTATCGTCTTGAGTCCAACCCGGTAAGACACGACTTA  
TCGCCACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGT  
AGGCGGTGCTACAGAGTTCTGAAAGTGGTGGCTAACCTACGGCTACACTAG  
AAGGACAGTATTGGTATCTGCGCTCTGCTGAAGGCCAGTTACCTTGGAAA  
AAGAGTTGGTAGCTCTGATCCGGAAACAAACACCACCGCTGGTAGCGGTG  
GTTTTTTGGTTGCAAGCAGCAGATTACGGCAGAAAAAAAGGATCTCAAG  
AAGATCCTTGTATCTTCTACGGGGCTGACGCTCAGTGGAACGAAAAC  
CACGTTAAGGGATTTGGCATGAGATTATCAAAAGGATCTCACCTAGA  
TCCTTTAAATTAAAAATGAAGTTAAATCAATCTAAAGTATAATGAGT  
AAACTTGGCTGACAGTTACCAATGCTTAATCAGTGAGGCACCTATCTCAG  
CGATCTGCTTATTCGTCATCCATAGTTGCCCTGACTCCCCGTCGTGAGAT  
AACTACGATACGGGAGGGCTTACCATCTGGCCCCAGTGTGCAATGATA  
GCGAGACCCACGCTCACCGCTCCAGATTATCAGCAATAAACCCAGCCAGC  
CGGAAGGGCCGAGCGCAGAAGTGGCTGCAACTTATCCGCCATCCA  
GTCTATTAAATTGTTGCCGGAAAGCTAGAGTAAGTAGTTGCCAGTTAATAG  
TTTGCACAGGTTGTTGCCATTGCTACAGGCATCGTGGTGTCACTCGTC  
GTTTGGTATGGCTTATTGCTCCGGTTCCCAACGATCAAGGGAGTTAC  
ATGATCCCCATGTTGTGCAAAAAAGCGGTAGCTCCTCGTCTCCGAT  
CGTTGTCAGAAGTAAGTGGCCGAGTGTAACTCATGGTTATGGCAGC  
ACTGCATAATTCTTACTGTCATGCCATCCGTAAGATGCTTTCTGTGACT  
GGTAGAGTACTCAACCAAGTCATTCTGAGAAATAGTGTATGCGGGGACCGAG  
TTGCTCTGCCGGCTCAATACGGGATAATACCGCAGCAGATAGCAGAAC  
TTAAAAAGTGTCACTATTGAAACGTTCTCGGGGGGAAACTCTCAAG  
GATCTTACCGCTGTTGAGATCCAGTTGATGTAACCCACTCGTGCACCCAA  
CTGATCTCAGCATCTTACTTTCAACCGCGTTCTGGGTGAGCAAAAC  
AGGAAGGCAAAATGCCGAAAAAAGGAAATAAGGGCAGACACGGAAATGT  
TGAATACTCATCTTCTTCAATATTATTGAAGCATTATCAGGGTT  
ATTGTCTCATGAGCGGATAACATATTGAATGTATTAGAAAAATAACAAA  
TAGGGGTTCCGCGCACATTCCCCGAAAGTGC

**FIG. 29B.**

FIG. 30A.

**FIG. 30B.**

FIG. 30C.

**FIG. 31A.**

**FIG. 31B.**

FIG. 31C.

**FIG. 32A.**

**FIG. 32B.**

FIG. 32C.

**FIG. 33A.**

**FIG. 33B.**

**FIG. 33C.**

TCATTTTTAACCAATAGGCCGAAATCGGCAAAATCCCTTATAAATCAAAA  
GAATAGACCGAGATAGGGTTGAGTGTTGTTCCAGTTGGAACAGAGTCC  
ACTATTAAAGAACGTGGACTCCAACGTCAAAGGGCGAAAAACCGTCTATC  
AGGGCGATGGCCCAC

FIG. 33D.

**FIG. 34A.**

## FIG. 34B.

**FIG. 35A.**

FIG. 35B.



FIG. 36.

FIG. 37A.

ATGGTGGTAGCTCTTGATCCGGCAAACAAACCGCTGGTAGCGGTTGGT  
GCCATGATCGCGTAGTCGATAGTGGCTCCAAGTAGCGAAGCGAGCAGGAC  
TGGGCGGGGGCCAAAGCGGTGGACAGTGCTCCGAGAACGGGTGCGEATA  
GAAATTGCATCAACGCATATAGCGCTAGATCCTTGCTAGAGTCGAGATCTG  
TCGAGGCCATGTGAGCAAAGGCCAGCAAAAGGCCAGAACCGTAAAAAGG  
CCCGCTTGTGGCGTTTCCATAGGCTCCGCCCCCTGACGAGCATCACA  
AAAATCGACGCTCAAGTCAGAGGTGGCAAAACCGACAGGACTATAAAGA  
TACCAAGGGCGTTCCCCCTGGAAAGCTCCTCGTGCCTCTCCTGGACCC  
CTGCCGCTTACCGGATACCTGTCCGCCCTTCTCCCTGGGAAGCGTGGCG  
CTTTCTCATAGCTCACGCTGTAGGTAATCTCAGTTGGTGTAGGTGCGT  
CCAAGCTGGCTGTGCAACGAAACCCGACAGGACTATAAAGA  
TATCCGGTAACTATCGCTTGAGTCCAAACCCGTAAGACACGACTATCGC  
CACTGGCAGCAGCCACTGGTAACAGGATTAGCAGAGCGAGGTATGTAGGC  
GGTGTACAGAGTTCTGAAAGTGGTGGCCTAACTACGGCTACACTAGAAG  
GACAGTATTGGTATCTGGCTCTGCTGAAGCCAGTTACCTTCGGAAAAAG  
AGTTGGTAGCTCTTGATCCGGCAAACAAACCGCTGGTAGCGGTTGGT -

FIG. 37B.

# FIG. 37C.

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